Example Scope of Work for 2012 Classroom Renovation Project:

- Within area of work, demo ceiling, prep for new drop ceiling installation.
- Within area of work, demo existing HVAV as shown on drawings.
- Within area of work, demo all bolted down seats and dispose of materials.
- Within area of work, demo cove base/stair nosings, prepare for new installation, and dispose of material.
- Within area of work, demo chalkboards/display boards and dispose of material.
- Within area of work, demo existing projector screens, dispose of material.
- Within area of work, demo existing projectors, speakers and return material to owner.
- Within area of work, demo wire mold and dispose of material.
- Within area of work, demo AV outlets, AV boxes, TV outlets, conduit, associated wiring/switches and dispose of material. Patch and repair walls, prepare for new drywall/paint installation.
- Within area of work, demo existing lighting, switches, conduit and associated wiring. Patch and repair walls to prepare for new switch installation at each door location as shown on drawings.
- Within area of work, demo all doors and frames. Prepare for new door/frame installation.
- Within area of work, fire out all walls, relocate any electric outlets and data boxes to new wall 18” AFF. Relocate all thermostats to new drywall location. Furnish and install new gypsum wall board at all walls, prep for paint/cove base installation. Furnish and install new receptacles and plate covers at existing, remaining, power receptacle locations at 18” AFF.
- Furnish and install doors. Exterior door/frames are to be welded metal frames with hollow metal doors; 1-1/2 hour fire rating. Classroom entry doors are to be 1-1/2 hour fire rating, solid wood doors with 3”x33” window with ¼” wired glass. Door hardware is to include doors prepared for CBord on-line locks; prepared for EPT and wire raceway for outside trim, silencers, hinges, Ruswin closers, Ruswin exit devices, millions to be lockable painted to match frame color in, (outside trim on inactive doors are to be dummy trim), kickplate, door stop, door status switch (switches need to be 3 wires in order to be nc/no), power transfer. Russwin handles. All hardware finishes are 626. Include all thresholds, weatherproofing, and floor patch/repair as necessary for a complete installation. **Russwin part numbers will be included in the first addendum.** Cylinders supplied and keyed by WVU.
- Furnish and install conduit, pullstrings, workboxes, furnish only wire for on-line CBord locks and equipment. CBord main equipment is housed in the data closet. Furnish card reader BR20 (3ACSGR6722251000), Belden shielded cable. Install all wiring and CBord on-line lock equipment for a complete installation.
- Furnish and install ceiling mounted projection screens (TWO Da-Lite Senior Electrol 133”x236” with low voltage/IR controller #82434 by Chief).
- From work box mounted on projection screen, provide ¾” conduit connectivity to work box "G" as shown on attached drawings. Complete low voltage installation by wiring "screen controller" to switch ‘B’.
- Furnish and install VCT (Armstrong Buttercream Yellow model# 51800) under seating area and on exit only stairs and foyer.
- Furnish and install Shaw / Divide 5A065 / Raw Denim 65485 carpet in aisles and rear of classroom.
- Furnish and install cove base (Roppe #P139 Deep Navy).
- Furnish and install stair nosings (Roppe Deep Navy). Use only manufacturer’s recommendations for glue.
- Prepare wall surfaces for painting, furnish and paint per WVU Standards (Sherwin Williams Inviting Ivory SW 6372 for walls, Sherwin Williams Naval SW 6244 for trim).
- Per WVU Standards, furnish and install ceiling board (Armstrong 1713 Fine Fissured; 24” x 24”-color white).
- Per WVU Standards, furnish and install 2x2 ceiling grid and, if necessary, additional hangers (Armstrong grid Prelude, 15/16” Tee System - color white).
- Reinforce ceiling grid at speaker locations; 4 wire.
- Furnish and install two Projector Mounting Systems (Display Devices DL3B-12.5 Series Projector Lift in white). Furnish/install electronically operated projection lift for projector; consisting of ceiling enclosure, plenum shroud, mount for projector, control switch, mounting accessories, and all other components necessary for complete installation. Installation is to be recessed in ceiling. Plenum rated housing with lipless closure frame; option OPT-3L. Provide enclosure to meet air plenum ceiling area needs. Ceiling enclosure is to accept ceiling tile. Furnish/install RS-232 Serial control interface option OPT-9 and provide for control at lectern. Furnish/install...
• Furnish and install work box at lectern location (Hubbell HBLCFB501BASE or Hubbell CFB11G4 floorbox) and accessories. Will require either core drilling or saw cutting the floor. ¾” conduit for power, 2” conduit with pull strings for projector, 1 ½” conduit with pull strings for data. Repair core drilled or saw cut floor after conduit installation is complete (install per attached drawing). Verify precise location on-site with Project Manager.

• Furnish and install new room HVAC per drawing.

• Furnish and install HVAC diffusers (Titus Model MB-30 - 1” slots in white-contractor is to field verify neck size required-use maximum slots in each diffuser). All Discharge Air diffusers shall be insulated. Ductwork shall only be insulated externally. Use 2” thick rolls of fiberglass batt, 0.75 pound per cubic foot density and a thermal conductivity (k value) of 0.29 @ 75 degrees F mean temperature. The blanket shall have a vapor barrier facing of an aluminum foil and kraft paper sandwiching a fiberglass scrim, (FSK), for reinforcing. Insulation shall not be compressed more than 25%.

• Furnish and install new room HVAC grille cover for returns.

• Furnish and install new HVAC per drawing.

• Furnish and install step lighting (Softstep II by Tivoli) using Amber colored lights. Will require trenching or saw cutting floor.

• Furnish and install lights and dimming system (see attached drawings).
  - 2x2 lights (Day-Brite Lighting Arioso 2’x2’ fixtures 2AVLG2CF55-PMW-277 & 55 GE Watt Biax lamps with Day-Brite/Philips ballasts HDF254T5 277 volt).
  - Washer lights (Elliptapar F124-T255-H-02-V-00-0-HCC/HCD-02-00-0) Order ends/intermediates as necessary, with Day-Brite/Philips ballasts HDF254T5 277 volt. Fixtures are to be 18” from wall, field verify stem length.
  - Control system
    - Interface MS232-1 for remote control at lectern.
    - If room is 277V - DA10HDF1 277 or DA20HDF1 277, 1 per scene. If room is 120V – MSP600VA - 1 per scene.
    - MSPRW or MSPRI-1 per entrance door. (Owner to furnish these)
    - MSP5AVES (Ellipse Series) – 1 per room (match color of MSPRW or MSPRI).
    - Furnish and install Philips Lolec ILS810 / ILS4RL W/ENCLOSURE & COVER, Philips Lolec ITSCS CEILING OCC SENSOR, 24V power supply, for each classroom.

Lighting system shall be controlled by switch (MSP5AVES) located at “C” on typical A/V electric sheet. System shall also be controlled by RS232 interface (MS232-1) connected to system “purple” control wire. ON/OFF switch is to be located at each entrance (MSPRW/MSPRI). Lighting shall be installed in minimum ¾” EMT conduit with pigtail no longer than 5 feet. All work boxes for “control” system shall be interconnected with minimum ¾” EMT conduit. Lighting system shall be “energized” by being continuously illuminated for 100 hrs upon initial start up. Lighting system will be programmed with “scene” information provided by the Project Manager.

• Provide a continuous 1-1/2” data conduit (may be run through existing wire trays/raceways) from data closet to workbox “G”. Run 1-1/2” conduit from workbox “G” to cell 3 of WVU blue Wiremold polytrack (stocked at Hite). In addition, from workbox “G” run ¾” conduit to workbox “F”. Install 2 pull strings in each conduit.

• Furnish and install 2” EMT conduit from lectern to wall polytrack (WVU blue Wiremold) to projector location with pull strings (per attached drawings).

From electric panel, identify available circuits and run in ¾” conduit to workbox “D” shown on typical A/V electric drawing attached. Run ¾” conduit to projector location and terminate per manufacturer’s instructions at duplex receptacle at projector mount. Run ¾” conduit to workbox with 120V for projector screen; terminate per projector screen manufacturer’s instructions. ¾” conduit from workbox “D” to polytrack to convenience receptacle “A” as shown on attached drawings. From “A”, extend circuit to floor box under lectern and terminate in duplex receptacles in floor box. A second 120V 20 amp circuit is a continuous run from panel board to lectern floor box and terminated in duplex receptacle.

• Furnish and install new exit lights. White housing, red LED, self-testing, charge rate/power on LED indicator light, listed for damp location, allows top, lateral or flush mount installation, vandal proof.

• Furnish and install KSI 8081 speakers and transformer KSI PZ90WJ 70 volt (transformer only needed in room with more than 4 speakers). Install ¾” conduit from speaker locations to work box “E” mounted above ceiling. Wiring for speakers is to be coiled in work box “E” in enough length to run to lectern. The wiring for speakers must be individually labeled with coordinating numbers. Install ¾” conduit from workbox to polytrack to lectern location per attached drawings.

• Furnish and install BLACK CHALKBOARDS. Side chalkboard is to be 10’ in length. Installed at 4’ AFF. Furnish and install vertical, sliding, 3 panel BLACK chalkboard unit, 16’ in width. Manually operated and wall mounted preferred as manufactured by Claridge Products and Equipment, Inc., (or approved equal). Sliding writing surface panels to be 24 gauge Vitracite Chalkboard. Fixed back panel to be chalkboard. Frame and exposed metal hardware and accessories as required for complete installation. Verify precise location on-site with Project Manager.
members to be extruded aluminum in etched and anodized satin finish with all corners reinforced with angles to strengthen unit and eliminate vibration. Panels to be equipped with ball bearing rollers for elimination of side motion and noise, plus eight ball bearing neoprene end rollers for effortless movement of panels. Sliding panels are counterbalanced and all cables rotate around one central pulley to eliminate racking.

- Furnish and install Sanford Giant Pencil Sharpener, Tan model #51131 (or approved equal) to the left of side blackboard.
- Furnish and install new electric panel in room B1; 125Amp, 3 phase, 3 wire, 480V, 43 circuit, bolt-in, with main breaker. Disconnect, identify, remove and replace all existing circuits from outlets/lights into new panel. This will require an electrical shutdown to be coordinated with the Project Manager; this will need to be done during off hours to avoid disruption to classes.
- Furnish and install acoustical wall treatment on rear wall (Armstrong Soundsoak blue plum).
- Sprinkler heads are to be replaced/adjusted. Furnish and install new sprinkler heads (Reliable Model G1 or approved equal; white finish). Sprinkler heads must be centered in ceiling tile. Materials and equipment provided shall be UL listed and/or FM approved in compliance with NFPA Standards. Coordinate outage with Project Manager.
- Furnish and install rigid vinyl wall protection by single exit only door as shown on drawings from FF to +7’AFF.
- Furnish and install new railings.
- Furnish and install new fire extinguisher cabinet. Larsens C2409-5r Semi-Recessed Cameo Series Fire Extinguisher Cabinet or approved equal.

**GC will be responsible to subcontract an AV vendor to furnish and install AV as described in the next pages.**

- Submit as-builts and/or field notes to owner upon project completion.
- Lecterns, seating, furniture are owner furnished, installed by others.
- Lab bench supplied by others; GC to do plumbing, gas and electric connections/valves.
- Data lines by others.
- Seating capacity signs by others.

Note: Drawings represent correct information to the best of WVU’s knowledge. Contractors are responsible to field verify existing conditions.

End of Scope of work for 2012 Classroom Renovation Project
See Attachments that include drawings and AV specifications